DEPARTMENT OF TRANSPORTATION
FEDERAL AVIATION ADMINISTRATION

R00012LA

Helicopter Transport Services

CH-53D

May 2, 2014
Revision 2

TYPE CERTIFICATE DATA SHEET R00012LA

This data sheet, which is a part of Type Certificate Data Sheet No. R00012LA, prescribes conditions and limitations under which the product for which the type certificate was issued meets the airworthiness requirements of the 14 Code of Federal Aviation Regulations (14 CFR).

Type Certificate Holder: Helicopter Transport Services, LLC
14497 Keil Road NE
Aurora, OR 97002

Type Certificate Holder Record: Transferred to Helicopter Transport Services, LLC on January 9, 2014

I Model CH-53D (Restricted Category Rotorcraft) Approved June 17, 2005. (See NOTES Section)

Engines: (2) General Electric T64-GE-413

Fuel: ASTM-D1655 (Jet A, Jet A-1, Jet B); JP-4, JP-5 (See Note 14 For Alternative Fuels)

Engine and Transmission Limits

Rating	Torque (% Q)	Output Horsepower (HP)	Gas Gen. Speed (%Ng)	Power Turbine Speed (%N_f)	Turbine Inlet Temp. (T_5)
Dual Engine Limits					
Take-Off (10 Min.)	--------	----------	100	125	727
Military Power (30 Min.)	118	7560	100	125	707
Normal Continuous	100	6400	58.5-100	95-105	671
Maximum Transient	(10 Sec.) 140	8950	(30 Sec.) 102.5	(55 Sec.) 140	(60 Sec.) 743
One Engine Limits					
One Engine Inop.(10 Min.)	--------	--------	100	125	727
One Engine Inop (30 Min.)	118	3780	100	125	707
Normal Continuous	100	3200	58.5-100	95-105	671
Maximum Transient (10 Sec.)	140	4475	(30 Sec.) 102.5	(55 Sec.) 140	(60 Sec.) 743

- (%Q) Values are Main Transmission Limits

Refer to Heavy Lift Helicopters, Inc. Report No. HLH-310, N.C., dated June 17, 2005, Rotorcraft Flight Manual CH-53D Helicopter, or later FAA approved revisions for additional limitation data.

Rotor Speed Limits	Power Off	Power On
Maximum	231 r.p.m. (125%N_r)	231 r.p.m. (125%N_r)
Minimum	185 r.p.m. (100%N_r)	185 r.p.m. (100%N_r)

Airspeed Limits	Vne (Never Exceed) Power On: Forward Flight 130 KIAS External Load above an operating weight of 38,000 lb 104 KIAS Vle/Vlo: 130KAIS/130KIAS
Center of Gravity (C.G. Range)	Most Forward C.G. Sta. 328.0 Most Aft C.G. Sta. 352.0 Refer to Heavy Lift Helicopters, Inc. Report No. HLH-310, N.C., dated June 17, 2005, Rotorcraft Flight Manual CH-53D Helicopter, or later FAA approved revisions for specific C.G. range and limits.
Empty Weight (C.G.)	None
Datum	336.4 Inches forward of the main rotor centroid.
Leveling Means	Leveling means is plumb line from top level plate located on frame at Sta. 222 and buttock line 42, adjacent to the personnel door opening, on the forward right hand side of aircraft. Leveling procedures contained in NAVAIR 01-230HMA-2-1, Section IV, Maintenance Instructions Manual.
Maximum Weight	42,000 lbs.
Minimum Crew	2 – (1) pilot at (+134.0), (1) copilot at (+134.0)
Number of Seats	2 at (+134.0) (See NOTE 12.)
Maximum Cargo	See NOTE 5.
Fuel Capacity	638 gal. at (+ 341.0). (2 tanks at 319.0 gal. each)
Oil Capacity	5.8 gal. at (+264.0) - (2 tanks 2.9 gal. each).
Rotor Blade and Control Movements	For rigging information, see NOTE 4.
Other Limits	Airframe Life Limit 10,000 hours Time In Service
Serial No. Approved	U.S. military surplus CH-53D helicopters as identified in Heavy Lift Helicopters, Inc. Serial Number Approved Report Number HLH-304, N.C., dated October 01, 2004, or later FAA approved revision.
Certification Basis	Part 21 § 21.25(a)(2) effective February 1, 1965, including Amendments 21-1 through 21-42 for the special purpose of: 1) Agricultural Operations under § 21.25(b)(1). Note: In accordance with Part 36 § 36.1(a)(4), compliance with the noise requirements was not shown. Therefore, aircraft certificated under this type certificate are only eligible for agricultural operations except by § 36.1(a)(4) and defined under § 137.3. 2) Forest and Wildlife Conservation Operations under § 21.25(b)(2). Note: In accordance with § 36.1(a)(4), compliance with the noise requirements was not shown. Therefore, aircraft certificated under this type certificate are only eligible for aerial dispensing of liquids and forest conservation material excepted by § 36.1(a)(4) and defined under § 137.3.

3) External Load Operation under § 21.25(b)(7).

Note: In accordance with § 36.1(a)(4), compliance with the noise requirements was not shown. Therefore, aircraft certificated under this type certificate are only eligible for external loads operations excepted by § 36.1(a)(4) and defined under § 133.1(b).

Any alteration to the aircraft for Special Purposes not identified above require further FAA approval and in addition, may require noise and/or flight testing.

General Note: Any subsequent modifications to the helicopters type certified under this Type Certificate are to have the certification basis for that modification established under 14 CFR part 21 § 21.101 published June 7, 2000 which became effective June 10, 2003. Otherwise non-significant modifications are to meet the requirements of 14 CFR 29 airworthiness standards, transport category, Amendment 1, effective August 12, 1965 and 14 CFR part 29 § 29.1529, Instructions for Continued Airworthiness, Amendment 20, effective September 11, 1980.

Date of Application: February 17, 2003

Production Basis: None. No helicopters may be produced under this approval. Prior to adding serial numbers to this Type Certificate, each candidate helicopter must pass a conformity inspection. The conformity inspection will be conducted in accordance with a Type Inspection Authorization, Part 1, or request for conformity that will include as a minimum, the inspections contained in the FAA Rotorcraft Directorate Restricted Category Conformity document dated September 25, 2001 or later FAA Approved revisions.

Equipment: The basic required equipment necessary for the particular special purpose operation must be installed for certification. Each helicopter is required to incorporate modifications as specified in:

1. Heavy Lift Helicopters, Inc. Report No. HLH-301, N.C., dated December 27, 2004, Engineering Configuration Report, or later FAA approved revisions.
2. Heavy Lift Helicopters, Inc. Report No. HLH-310, N.C., dated June 17, 2005, Rotorcraft Flight Manual CH-53D Helicopter, or later FAA approved revisions.
3. Heavy Lift Helicopters Inc. Report No. HLH-310CL, N.C., dated June 17, 2005, CH-53D Pilots Check List, or later FAA approved revisions.
4. Heavy Lift Helicopters, Inc. Report No. HLH-311, N.C., dated June 17, 2005, Functional Check Flight Procedures, or later FAA approved revisions.
5. U. S. Navy External Cargo Hook P/N 65375-04500-101 installed on model CH-53D as part of the Military configuration

NOTES

NOTE 1. A current weight and balance report including a list of equipment included in the certified empty weight, and loading instructions when necessary, must be provided for each helicopter at the time of original airworthiness certification.

1. Refer to Part 1, Chapter 2, Paragraph 2.3.11 of Heavy Lift Helicopters, Inc. Report No. HLH-310, N.C., dated June 17, 2005 Rotorcraft Flight Manual CH-53D Helicopter, or later FAA Approved revisions.

2. Heavy Lift Helicopters, Inc. Report HLH-306, N.C., dated March 1, 2005, Weight and Balance Report, or later FAA Approved revisions.

3. U.S. Navy Handbook of Weight and Balance Data, No. AN-01-1B-40, Model CH-53A/D, for weight and balance determination.

NOTE 2. The following placards must be prominently displayed in the cockpit in full view of the pilots:

Placard No. 1

THIS HELICOPTER MUST BE OPERATED IN COMPLIANCE WITH THE OPERATING LIMITATIONS SPECIFIED IN THE APPROVED HELICOPTER OPERATIONS MANUAL. REFER TO HEAVY LIFT HELICOPTERS REPORT NO. HLH-310, N.C., DATED JUNE 17, 2005, OR LATER FAA APPROVED REVISIONS, ROTORCRAFT FLIGHT MANUAL CH-53D HELICOPTER, CHAPTER 2, FOR OPERATING LIMITS AND RESTRICTIONS.

Placard No. 2

THIS ROTORCRAFT MUST BE OPERATED IN ACCORDANCE WITH THE RESTRICTED CATEGORY OPERATING LIMITATIONS OF 14 CFR PART 91 § 91.313.

Placard No. 3

EXTERNAL LOADS OPERATIONS: Vne WILL BE DETERMINED FOR EACH PROPOSED EXTERNAL LOAD APPLICATION.

Placard No. 4

VFR OPERATIONS ONLY.

NOTE 3. The builder's data plate required by part 45 § 45.13 must be installed in accordance with Heavy Lift Helicopters, Inc. Drawing No. HLH-3002, dated December 07, 2004, or later FAA approved revisions.

NOTE 4. The helicopter(s) must be serviced, maintained and inspected, repaired, and overhauled in accordance with the requirements and documents specified in Heavy Lift Helicopter, Inc. Instructions for Continued Airworthiness Report HLH-302, N.C., dated September 16, 2004, or later FAA accepted revision, or inspected in accordance with other FAA accepted inspection programs. The service life limited parts overhaul and retirement intervals for these helicopters is specified in Heavy Lift Helicopters, Inc., Instructions For Continued Airworthiness Report, Report No. HLH-302, N.C., dated September 16, 2004 or later FAA approved revision. A FAA approved/accepted copy must accompany each helicopter on delivery.

NOTE 5. This helicopter must be operated in accordance with a Flight Manual comprised of the following:

(1) Heavy Lift Helicopters, Inc. Report No. HLH-310, Rotorcraft Flight Manual dated June 17, 2005, or later FAA approved revisions.

NOTE 6. Prior to obtaining an original Airworthiness Certificate:

A. Each helicopter must pass a conformity inspection in accordance with Heavy Lift Helicopter, Inc. Engineering Configuration Report HLH-301, N.C., dated December 27, 2004, or later FAA approved revision. The Engineering Configuration Report identifies the U.S. Navy airframe changes, and special purpose modifications accomplished on that particular helicopter.

B. Each helicopter must pass an inspection for any possible hidden damage and the Military records reviewed for acceptability of any repairs or alterations.

C. The maintenance, overhaul, and modification records of each helicopter must be reviewed for military changes that may affect the airworthiness of the helicopter. Modifications and changes of equipment that affect the safety or performance of the helicopter must be approved by the Federal Aviation Administration.

D. After the required inspections, the aircraft must be found to be in a good state of preservation, repair, and in a condition for safe operation.

NOTE 7. This aircraft is prohibited from carrying cargo for compensation or hire. Carriage of cargo is limited to such cargo that is incidental to the aircraft owner/operator's business which is other than air transportation.

NOTE 8. A Restricted Category helicopter may not be operated in a foreign country without the express written approval of that country.

NOTE 9. This helicopter has not been shown to meet the requirements of the applicable comprehensive and detailed airworthiness code as provided by Annex 8 to the Convention on International Civil Aviation.

NOTE 10. Military to Civil or Military to Military engine changes are allowed provided the replacement engine is of the same make and model as identified in this TCDS. The military or civil replacement engine must have proper military or civil records and have the applicable FAA Airworthiness Inspection accomplished and is in an airworthy condition.

NOTE 11. The Safety of Flight Compliance Report for the helicopter and engine contained in Heavy Lift Helicopters, Inc., Safety of Flight Report HLH-305, N.C., dated December 27, 2004, or later FAA Approved revision, must be complied with prior to original airworthiness certification.

NOTE 12. No person may be carried in this helicopter during flight unless that person is essential to the purpose of the flight. For additional mission configurations see Heavy Lift Helicopters, Inc. Report No. HLH-301, dated December 27, 2004 or later FAA approved revisions and U.S. Navy Document No. A1-H53AD-110-000, Chg. 2, dated February 15, 1988.

NOTE 13. Alternative and emergency fuels are listed in Heavy Lift Helicopters, Inc. Report No. HLH-310, N.C., dated June 17, 2005, Rotorcraft Flight Manual CH-53D Helicopter, Section I, Part 3, Approved Fuels and Lubricants, or later FAA approved revisions.

NOTE 14. Any alteration to the type design of this aircraft may require Instructions for Continued Airworthiness. These instructions must be submitted and accepted by FTW-AEG, Aircraft Evaluation Group Office, prior to approval for return to service.

NOTE 15. The certification life limits for the helicopter, its engine and appliances were based on satisfactory service history as designed and operated by the military. Therefore, to operate and maintain the aircraft to the original acceptance criteria, and maintain its safe for intended use requirement, cycle counting and operational time tracking is required on certain critical components. See Heavy Lift Helicopters, Inc. Report HLH-302, CH-53D Instructions For Continued Airworthiness, "Section II, Airworthiness Limitations Schedule", dated September 16, 2004, or later FAA approved revisions.

END